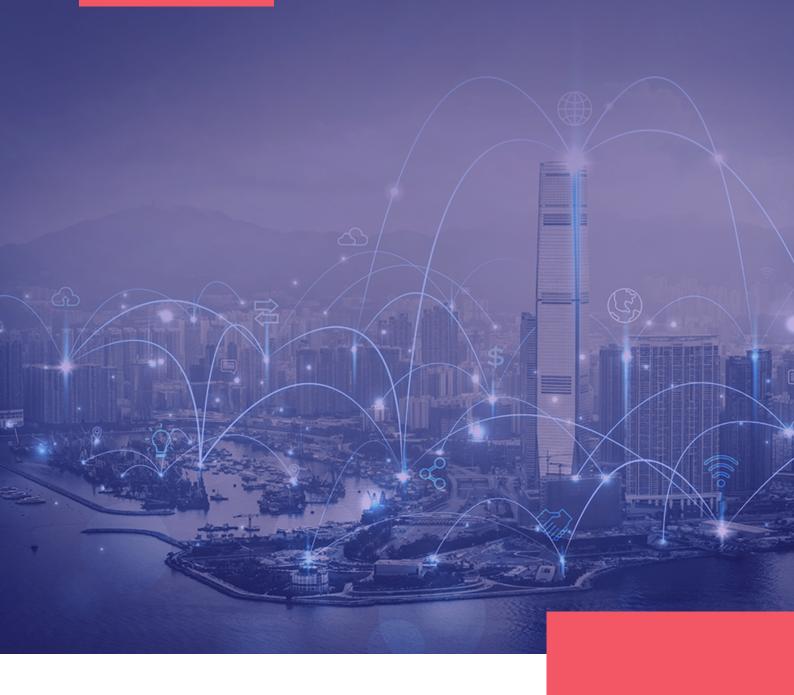
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Top 20 global telco updates

Q3-2023



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Key Takeaways

- In Q3-2023, the top 20 global telcos analysed witnessed a decline in revenues after reporting growth in first two quarter of 2023. Their combined revenue declined by 0.4% YoY in constant currency, with only 55% experiencing growth.
- India's top telecom companies, Bharti Airtel and Reliance Jio, reported lower growth compared to previous quarters, along with China Mobile.
- Japanese telcos KDDI and Softbank reported revenue growth in Q3-2023, driven by growth in Personal and Business services segment.
- In Q3-2023, the top 19 global telecommunications companies experienced a collective increase in their EBITDA margin, rising by 120 basis points YoY to reach 36.2%. Among them, leading Indian telcos Bharti Airtel and Reliance Jio maintained strong EBITDA margins of over 50%.
- During Q3-2023, as 5G adoption peaked worldwide, telcos' CAPEX spending dropped to 14.2%, a 290 basis point reduction.
- Global telecom companies have seen either stagnant or declining ARPU growth. Indian telecom companies, however, have seen low-to-mid single digit growth rates despite having lower ARPU levels than their global peers. Meanwhile, Japanese telecom companies have continued to see a decline in ARPU.
- In Q3-2023, telcos formed strategic partnerships with leading vendors like Nokia, Ericsson, and NVIDIA to drive innovation in enterprise solutions, IoT connectivity enhancements, and network optimization.

Financial Performance

India telcos continue to outperform their global peers

In Q3-2023, the top 20 global telecommunications companies covered in this analysis saw a 0.4% year-on-year decline in their combined revenue, with only 55% showing positive growth.

- Indian telecom companies Bharti Airtel and Reliance Jio experienced moderate growth in Q3-2023, compared to previous quarters.
 - a. Reliance Jio experienced a substantial 10.7% YoY revenue growth, reaching ~USD 3.2 billion (INR 268.7 billion) in Q3-2023.
 - 1. Jio's consistent growth was due to the expansion of its digital platforms and increased subscriber traction. The introduction of Jio True5G in the youth segment has significantly boosted Jio's competitive advantage and increased the presence of premium devices on its network.
 - 2. Reliance Jio has recently expanded its enterprise services suite, claiming to have extended its reach to over 85% of large enterprises. The telco also boasts a government bid win rate of over 80% and provides connectivity to more than 400 BFSI accounts, including the top 20 banks.
 - b. In Q3-2023, Bharti Airtel achieved a 7.3% YoY revenue growth to reach ~USD 4.5 billion, driven by strong performance in its Indian operations.
 - 1. Revenue from its India operations experienced a 10.9% YoY growth, with the business segment leading at 9.5% YoY. This was driven by a strong demand for data and connectivity solutions.
 - 2. Bharti Airtel's home business segment has shown a positive growth trend, with a YoY increase of 23.3%, primarily owing to the acquisition of new customers. The company has focused on digitization and attracting high-value customers, leading to a total customer count of 6.9 million. To further expand its presence, the telco plans to accelerate rollouts through an innovative asset-light local cable operator partnership model and now they are in 1239 cities of India.
 - 3. Additionally, it's Mobile services revenues grew by 11% YoY, driven by improved realization, 4G/5G customer additions, and higher ARPU.
- Chinese telcos' Q3-2023 revenue growth slowed due to decline in ARPU and mobile subscribers.

- a. China Mobile revenue increased by 8.1% YoY in Q3-2023, to reach ~USD 33.8 billion (CNY 244.8 billion).
 - 1. The increase in telecommunication services revenue by 9.7% YoY, reaching ~USD 29.4 billion (CNY 212.4 billion), was driven by an increase in mobile and fixed broadband customers.
 - 2. In Q3-2023, the total number of mobile customers reached 990 million, driven by a 34.6% YoY increase in 5G packaged customers. Meanwhile, fixed broadband customer growth surged by 45.5% YoY, reaching 425 million.
- b. China Telecom revenue increased 4.2% YoY in Q3-2023, to reach ~USD 17.1 billion (CNY 123.6 billion).
 - 1. The revenue growth was driven by a 16% increase in Industry digitization revenue, which reached ~USD 4.3 billion (CNY 30.9 billion), coupled with a modest 1.6% increase in mobile service revenue, reaching ~USD 7 billion (CNY 50.3 billion).
- Japan based telcos KDDI and Softbank also reported revenue growth in Q3-2023.
 - a. KDDI's Q3-2023 revenue reached ~USD 10 billion (JPY 1.5 trillion), showing a YoY growth of 4.1%. This growth was driven by the Personal and Business services segments, which experienced growth of 2.1% and 8.6%, respectively.
 - b. Softbank's revenue increased by 4.0% YoY in Q3-2023, reaching ~USD 10.4 billion (JPY 1.5 trillion). Although its consumer segment experienced a slight decline of 0.9%, the growth in revenue of its other segments, such as Enterprise, Distribution, Media and EC, and Financial segment, contributed to the overall revenue growth.

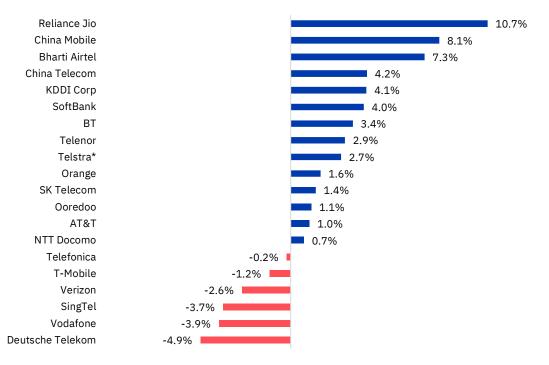


Exhibit 1: Revenue trends (% change) YoY basis, Q3-2023

Source: Company reports, Industry Reporting, Twimbit Analysis

* Revenue growth rate for Telstra is estimated, as the telco reports financials on Half-yearly basis Note: Bharti Airtel, Deutsche Telkom, Ooredoo, SingTel, Telenor, and Vodafone group performance is considered for the report.

- Deutsche Telekom's Q3-2023 revenue declined 4.9% YoY to ~\$30B (EUR 27.6B), mainly due to the US region's revenue decline. However, the overall group's organic revenue increased by 0.7%.
 - a. In Q3-2023, revenue from US declined by 8.7% YoY basis to reach ~USD 18.9 billion (EUR 17.4 billion), owing to 4.1% decline in service revenue.
 - b. T-Mobile's postpaid service revenue grew by 6.4% YoY in Q3-2023, resulting in a 3.9% increase in service revenue (4.7% on an organic basis) which amounted to ~USD 15.9 billion. However, T-Mobile's overall US revenue declined by 1.3% YoY to around USD 19.2 billion due to lower lease revenues and fewer postpaid upgrades as compared to the previous year.
- Vodafone's Q3-2023 revenue decreased 3.9% YoY to ~USD 12.2 billion (EUR 11.2 billion) due to lower revenue from Europe and Vodacom in South Africa.
 - a. In Q3-2023, the revenue generated from Europe has decreased by 3.2% to ~USD 9.1 billion (EUR 8.4 billion). This decline can be attributed to a reduction in mobile service revenue which fell by 1.8% YoY and amounted to ~USD 4.8 billion (EUR

- 4.4 billion). However, there was a 1.7% increase in fixed service revenue, which reached ~USD 3.3 billion (EUR 2.9 billion).
- b. Germany and UK revenue increased by 1.0% and 5.1% respectively in Q3-2023 on YoY basis, however could not offset the overall revenue decline.
- c. Vodacom's revenue declined by 14.8% YoY in Q3-2023 to ~USD 1.6 billion (EUR 1.5 billion), primarily due to decline in its mobile services revenue.
- d. As part of its strategy to focus on markets with sustainable structures and sufficient local scale, Vodafone Spain has signed an agreement with Zegona Communications to sell its Spain business for ~USD 5.3 billion (EUR 5 billion). Vodafone Spain's revenue has declined over the past eight quarters, and it has been dragging down the overall performance of the company.
- SingTel's Q3-2023 revenue fell 3.7% YoY to ~USD 3.3 billion (SGD 3.5 billion) due to a decline in Optus and Singtel's Singapore operations.
 - a. During Q3-2023, Optus revenue dropped by 5.9% YoY to USD 1.3 billion (SGD 1,787 million), while Singtel Singapore's revenue decreased by 4.7% YoY to USD 0.7 billion (SGD 0.9 billion).
- Verizon's Q3-2023 revenue declined by 2.3% YoY, with service revenue and wireless equipment revenue dropping by 0.5% and 11.6%, respectively. The company's overall revenue for the quarter was ~USD 33.3 billion.
 - a. In the third quarter of 2023, revenue from wireless equipment sales in the consumer segment decreased by 11.8% to about USD 4.9 billion. This was due to a lower volume of wireless devices sold, mainly because there was a 30% decline in upgrades. Additionally, there was a decline in equipment revenue in the "Business Markets" and "Enterprise and Public Sector" segments. This led to an overall decline in equipment revenue, which reached ~USD 5.8 billion in Q3-2023.

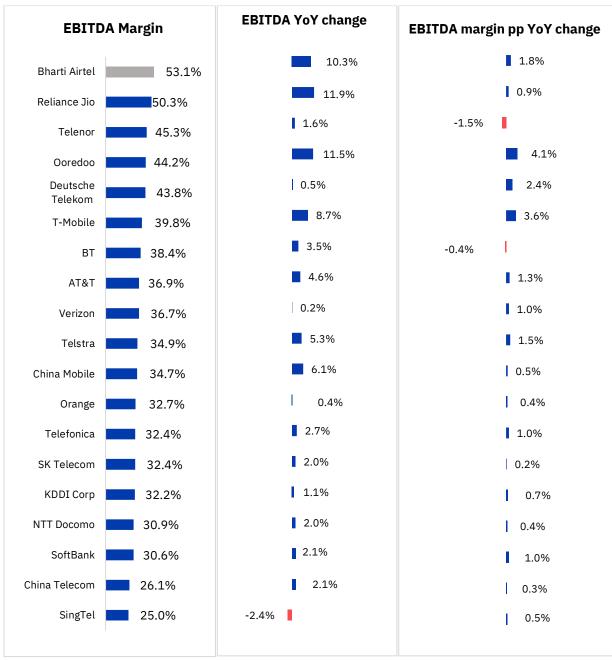
EBITDA Performance

Combined EBITDA margin for top 19 global telcos grew to reach 36.2%

The EBITDA margin for the top 19 telcos increased by 120 basis points YoY, reaching 36.2% in Q3-2023. Bharti Airtel and Reliance Jio, two leading Indian telcos, maintained a strong EBITDA margin of over 50%, demonstrating their robust financial performance.

- Bharti Airtel Group continued their "War on Waste" cost optimization program, successfully reducing operating expenses. As a result, the EBITDA margin increased by 180 basis points to reach 53.1% in Q3-2023.
- In Q3-2023, Reliance Jio prioritized cost optimization by reducing network operating costs and enhancing efficiency, resulting in a 50.3% increase (up 90 basis points).
- Telenor saw a 1.6% year-over-year increase in EBITDA. However, the EBITDA margin decreased by 150 basis points in comparison to Q3-2023. The 1.6% year-over-year growth was due to strong operational performance, lower energy prices, and a one-time positive effect in Pakistan last year.
- Ooredoo's Q3-2023 EBITDA increased by 11% YoY, with its EBITDA margin rising by 410 basis points to reach 44.2%.
 - a. This progress was driven by strong revenue growth and effective cost management, resulting in significant EBITDA growth in Iraq, Algeria, and Kuwait. However, lower EBITDA in Qatar, Oman, and Tunisia partially offset these gains.
- T-Mobile's EBITDA margin reached 39.8% in Q3-2023, rising 360 basis points YoY, owing to service revenue growth and increased synergy realizations.
 - a. The expansion of the company can be attributed to the decrease in SG&A expenses and lower cost of services, not including merger-related expenses and other exceptional items such as severance and costs associated with the August 2023 workforce reduction. However, this growth was partially offset by higher costs of equipment sales, not including merger-related expenses.
- In Q3-2023, the SingTel group's EBITDA decreased by 2.4% YoY due to increased investment in digital capabilities.

Exhibit 2: EBITDA performance, Q3-2023



Source: Company reports, Industry Reporting, Twimbit Analysis

Note: Bharti Airtel, Deutsche Telkom, Ooredoo Singtel, Telenor, and Vodafone group performance is considered for the report

^{*} Details for Telstra is estimated, as the telco reports financials on Half-yearly basis

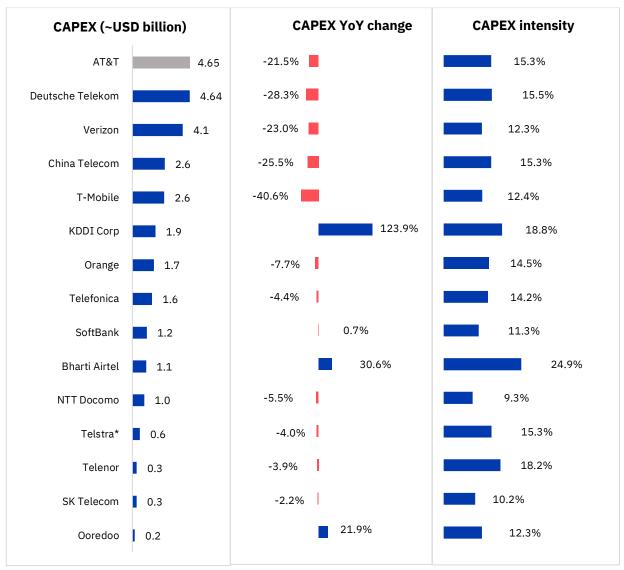
CAPEX Performance

CAPEX spending declines as 5G rollout reaches peak

Telecom companies reduced CAPEX spending to 14.2% in Q3-2023, a 290 basis point drop, as 5G adoption peaked. Telcos, for the most part, experienced a decline in their earnings, as they had already achieved the peak of their 5G rollout. This highlights the industry's commitment to aligning investments more effectively with market demands. However, Bharti Airtel and Ooredoo were exceptions to this trend, reporting a YoY increase in CAPEX spending due to their investments in 5G-ready networks.

- KDDI Corp increased CAPEX spending by 123.9% after acquiring an urban data center portfolio in Downtown Toronto from Allied Properties REIT.
- Bharti Airtel group reported a 63.9% YoY increase in CAPEX spending in Q2 2023, reaching ~USD 1.1 billion (INR 92 billion), attributed to its plans for 5G rollout in India.
 - a. In Q3-2023, the India operations recorded a significant YoY increase of 47.9% in CAPEX spending, amounting to a~USD 0.9 billion (INR 77.8 billion). On the other hand, Africa operations reported a modest YoY increase of 5.1% and reached around USD 140 million (INR 14.2 billion). However, the South Asia operations witnessed a decline of 31.1%.
- In Q3-2023, Ooredoo's capital expenditure (CAPEX) spending increased significantly by 21.9% and reached ~USD 0.2 billion (QAR 0.7 billion). The growth in CAPEX was attributed to the company's strategic investments in Oman, Iraq, Tunisia, and the Maldives to drive market growth. Based on historical trends, it is expected that CAPEX spending will continue to increase in the last quarter.

Exhibit 3: CAPEX performance, Q3-2023



Source: Company reports, Industry Reporting, Twimbit Analysis

ARPU Performance

Global telcos witness decline in ARPU growth rates

Most major global telecom companies have experienced either a decline or no growth in their average revenue per user (ARPU). However, Indian telecom companies have been able to achieve low-to-mid single-digit growth rates despite having lower ARPU levels compared to their global counterparts. On the other hand, Japanese telecom companies have continued to experience a decline in their ARPU.

- Reliance Jio's ARPU increased by 2.5% in Q3-2023, reaching ~USD 2.2 (INR 181.7).
 This growth was driven by a better mix of subscribers across both mobility and wireline services, although it was partially offset by the start of 5G services.

 However, the rate of ARPU growth slowed down due to the addition of low-paying Jio Bharat phone users and the unlimited 5G offering.
- Bharti Airtel Mobile ARPU increased to ~USD 2.5 (INR 203) in Q3-2023 as compared to ~USD 2.3 (INR 190), owing to its sustained focus on acquiring high value customers and improved realizations.
- Softbank's ARPU has been declining, reaching ~USD 26.0 in Q2-2023, compared to approximately USD 26.9 in Q2-2023. It introduced new pricing plans in October 2023, with the expectation that ARPU will stabilize and stop declining, provided net subscriber additions remain steady.
- SK Telecom ARPU declined by 2.4% YoY in Q3-2023 to ~USD 22.8 (KRW 29,913).

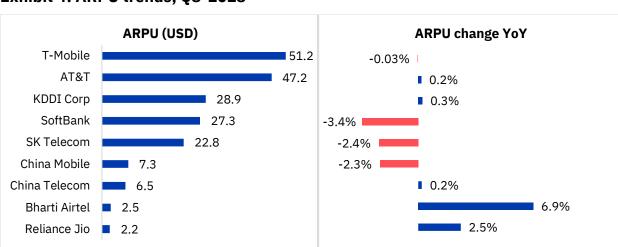


Exhibit 4: ARPU trends, Q3-2023

ARPU for T-Mobile is calculated and ARPU for Bharti Airtel is for India operations only Source: Company reports, Industry Reporting, Twimbit Analysis

Key Partnerships

Telcos continue to pursue partnerships and collaborations to promote innovation, expand reach, and enhance customer experience

The partnership agreements between the telecommunications companies cover a wide range of areas. These include 5G network slicing services, satellite-based Narrow Band IoT (NB-IoT) services, open networks, data storage and analysis, satellite broadband networks, satellite-to-cellular services, IoT connectivity, managed network services, rural internet connectivity, data center colocation, cloud services, computing and network convergence, as well as innovative application development.

These strategic collaboration agreements are expected to have a significant impact on the future of telecommunications.

Exhibit 5: Key partnership, Q3-2023

Period	Telco	Partner Name	Description
Sep- 2023	Tomorrow, Together	SAMSUNG	KDDI and Samsung signed a Memorandum of Understanding (MOU) to form a 5G Global Network Slicing Alliance and collaborate for the introduction of commercial 5G network slicing services.
	Telefónica	💸 skylo	Telefonica partnered with Skylo, to provide satellite-based Narrow Band IoT (NB-IoT) services globally starting in early 2024, with Europe and North America as the initial markets.
	Telefónica	ERICSSON	Telefonica collaborated with Ericsson for accelerating the adoption of open networks built on Ericsson's cloud Radio Access Network (RAN) architecture.
	Telefónica	** snowflake*	Telefonica Tech partnered with Snowflake to integrate Snowflake's data cloud into its multicloud data storage and analysis platform offerings, enabling enterprises to manage their data efficiently and securely in a multi-cloud environment.

Sep- 2023	verizon [,]	CONTRIBUTION	 Verizon partnered with EK solutions to offer integrated services combining EKA Freight Management and Verizon Connect Telematics services for fleet customers starting in Q4- 2023.
	O	PRONICS Programatic Protons Salience Labs	Vodafone partnered with Spain-based iPronics and UK-based Salience Labs to develop silicon photonic chips for next-generation mobile networks. These chips will be deployed in Vodafone's base stations, enabling ultra-low latency, programmable, and sustainable mobile networks.
	Ŧ	ERICSSON	Deutsche Telekom collaborated with Ericsson to provide communication and network Application Programming Interfaces (APIs) to developers and enterprises.
	Tomorrow, Together	a Asuene	KDDI partnered with Asuene to assist companies in their decarbonization efforts by utilizing "KDDI Green Digital Solution" and "Asuene" offerings.
	T elstra	paloalto®	Telstra and Palo Alto joined forces to offer Telstra's Australian and global business customers an expanded suite of cybersecurity products and services.
	Singtel	Globe	SingTel partnered with Globe to strengthen Globe's enterprise architecture and information and communications service offerings for its clients.
		56 OPEN INNOVATION LAB	AT&T became a founding partner of the 5G Open Innovation Lab.
	SoftBank	eutelsat ONEWEB eutelsat group	Softbank signed a distribution partnership agreement to deliver satellite communication services across Japan.
	∂ airtel	Multiple Device manufactures	 Airtel Nigeria collaborated with several manufacturers of 5G-enabled devices to promote 5G adoption in the country.

	T		
Sep- 2023	Jio	◎ NVIDIA .	 Reliance Jio collaborated with NVIDIA for the development of supercomputing infrastructure to advance AI capabilities in India.
	SK telecom	TM	SK Telekom and Telekom Malaysia signed a Multi-Access Edge Computing (MEC) business agreement, enabling Telekom Malaysia to provide multi-access edge computing from all its data centers to customers in Malaysia and the region.
	O	amazon	Vodafone partnered with Amazon, to leverage Amazon's forthcoming Project Kuiper satellite broadband network to expand the reach of their 4G/5G cellular networks in Africa and Europe.
	Tomorrow, Together	SPACEX	KDDI partnered with SpaceX to offer satellite- to-cellular services in Japan by utilizing SpaceX's Starlink low-Earth orbit satellites and KDDI's wireless spectrum.
	中国移动 China Mobile	indosat ooredoo hutchison	China Mobile signed a memorandum of understanding (MoU) to combine their respective strengths in developing communications, data centers, and infrastructure technologies to address the needs of their global customers.
	ooredoo'	FOT WORLD ALLIANCE®	 Ooredoo joined the IoT World Alliance as a member to advance IoT connectivity in the Middle East and Africa region.
Aug- 2023	T elstra	dalet	Telstra Broadcast Services (TBS) collaborated with Dalet to utilize Dalet's media workflow solutions in conjunction with TBS's infrastructure and operations teams to accelerate the digital transformation of media workflows in the Asia-Pacific region.
	SoftBank	Microsoft	Softbank established a strategic alliance with Microsoft Japan to cooperate in the areas of cloud services and artificial intelligence (AI).
	ooredoo'	TECH malnindra Google Cloud	Ooredoo partnered to further strengthen digital transformation, aiming to modernize its IT

			operations by implementing a digital platform- based approach to enhance performance and digital offerings, thereby further improving customer experience.
Aug- 2023	verizon ⁄	HCLTech	Verizon Business partnered with HCL to offer managed network services to its clients globally.
	Telefónica	STARLINK	Telefonica collaborated with Starlink to enable Starlink to deliver internet connectivity in rural and remote areas through Telefónica Global Solutions (TGS).
	Λi	♦♦ ҮОТТА	 Vodafone Idea partnered with Yotta to bolster its data center colocation and cloud services portfolio offerings for enterprises.
	P 中国电信 CHINA TELECOM	Lenovo	China Telecom's Guangdong Branch signed an agreement with Lenovo to leverage their mutual expertise in promoting computing and network convergence and digital-reality convergence.
	P 中国电信 CHINA TELECOM	 ∭ iFLYTEK	China Telecom entered into an agreement with iFLYTEK, to further explore innovative applications and develop next-generation information technologies such as 5G, AI, and cloud computing.
	Singtel	SK telecom	SingTel formed a global AI alliance with SK Telecom, Deutsche Telekom, and e& to accelerate their existing telco business transformation by leveraging artificial intelligence (AI).
July- 2023	Singtel	Ezscaler	SingTel partnered with Zscaler to provide managed security services in the Asia-Pacific region.
	Singtel	SAP	SingTel collaborated with SAP to develop the Intelligent EdgeAggregator (IEA), a 5G-enabled edge computing solution designed to enhance cloud functionality and computing capabilities within SingTel's existing network architecture.

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	华 申園电信 CHINA TELECOM	A Zain & Omantel Company	China Telecom Global signed an agreement to leverage mutual expertise and expand capabilities, including the adoption and advancement of M2M, Internet of Vehicles (IoV), and Internet of Things (IoT), in the Middle East and Asia-Pacific region.
July- 2023	~	neīel group	Telenor extended its agreement with Netel for a one-year period, covering contractor assignments and deliveries of fiber installations across Norway.
	T elstra	STARLINK	Telstra partnered with Starlink to utilize its satellite connectivity services to offer home phone and broadband services to remote customers in Australia.

Source: Company reports, Industry Reporting, Twimbit Analysis

Research Methodology and Assumptions

- The data collection for this report was carried out using secondary research methods and information obtained from the respective telecommunications companies. Twimbit has followed a calendar year approach to analyze the data in this report, which means that Q1 refers to the period of January to March.
- For fair representation and analysis, we have considered a constant currency rate for conversion from local currency to USD value. The USD conversion rate is the average calculated value for the period July-September 2023.
- The report analyses Revenue and EBITDA for 20 and 19 telcos respectively, as Vodafone doesn't report EBITDA every quarter. Additionally, for CAPEX and ARPU, the analysis is for 15 and 9 telcos respectively.
- Telstra reports its financial results on a half-yearly basis. To analyze its quarterly
 performance, we have taken an average of the half-yearly reported figures, giving
 equal weightage to the underlying quarters. Therefore, we have estimated
 numbers for Telstra's Q3 analysis.
- Bharti Airtel, Deutsche Telkom, Ooredoo Singtel, Telenor, and Vodafone group performance are considered in this report.
- Blended mobile ARPU is considered for the analysis, wherever applicable.





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